



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002119  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
\_\_\_\_\_  
Analytical Supervisor

**Lab-Sample Number:** K00002119001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 4.0  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY004.0RO  
**Date/Time Collected:** 01/20/2009 13:15  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.83 pH Units  
**Chlorine, residual:**  
**Conductivity:** 40 uMHO  
**Temperature:** 2.1  
**Dissolved Oxygen:** 12.99 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	12	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/20/2009 13:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.44 pH Units  
**Chlorine, residual:**  
**Conductivity:** 48 uMHO  
**Temperature:** 3.48  
**Dissolved Oxygen:** 11.63 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	17	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	18	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.2	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	77	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/20/2009 13:55  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.71 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 5.40  
**Dissolved Oxygen:** 10.55 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	95	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	74	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	32	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/20/2009 14:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 179 uMHO  
**Temperature:** 5.44  
**Dissolved Oxygen:** 10.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	82	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.8	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	190	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/20/2009 14:50  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 7.18  
**Dissolved Oxygen:** 11.21 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	79	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

<b>Lab-Sample Number:</b>	K00002119006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.91      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley F	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA-Ash Spill	<b>Conductivity:</b>	195      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	5.82
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.27      mg/L
<b>Date/Time Collected:</b>	01/20/2009    15:05	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	01/21/2009    13:45		
<b>Received By:</b>	Ken Hitchman		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	120	mg/L	3.8	10	M Chen	1/22/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	82	mg/L	0.7	1	M Chen	1/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	S Burchfield	1/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	S Burchfield	1/24/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

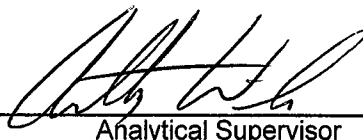
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002119  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
Analytical Supervisor



**Lab-Sample Number:** K00002119001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 4.0  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY004.0RO  
**Date/Time Collected:** 01/20/2009 13:15  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327-34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.83 pH Units  
**Chlorine, residual:**  
**Conductivity:** 40 uMHO  
**Temperature:** 2.1  
**Dissolved Oxygen:** 12.99 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	U	µg/L	6.4	10	M Pattanayek	1/24/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	24	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	0.34J	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	2.9	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	0.34J	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	48	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	1.2	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	6.2	µg/L	1.9	5	M Pattanayek	1/24/2009

**Lab-Sample Number:** K00002119001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 4.0  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY004.0RO  
**Date/Time Collected:** 01/20/2009 13:15  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.83 pH Units  
**Chlorine, residual:**  
**Conductivity:** 40 uMHO  
**Temperature:** 2.1  
**Dissolved Oxygen:** 12.99 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/20/2009 13:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.44 pH Units  
**Chlorine, residual:**  
**Conductivity:** 48 uMHO  
**Temperature:** 3.48  
**Dissolved Oxygen:** 11.63 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	1400	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	2800	µg/L	32.0	50	M Pattanayek	1/26/2009
Antimony	0.34J	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	8.8	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	79	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	0.56J	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	3.7J	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	2.1	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	7.3	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	3.8	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	61	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	4.4	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	0.55J	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	11	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	8.4	µg/L	1.9	5	M Pattanayek	1/24/2009

**Lab-Sample Number:** K00002119002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 01/20/2009 13:45  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**

**pH:** 7.44 pH Units  
**Chlorine, residual:**  
**Conductivity:** 48 uMHO  
**Temperature:** 3.48  
**Dissolved Oxygen:** 11.63 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002119003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/20/2009 13:55  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.71 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 5.40  
**Dissolved Oxygen:** 10.55 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	230	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	220	µg/L	6.4	10	M Pattanayek	1/24/2009
Antimony	1.1	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	1.4J	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	39	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	0.36J	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	2.4	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	0.65J	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	40	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	1.1	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	0.03J	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	0.47J	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	3.6J	µg/L	1.9	5	M Pattanayek	1/24/2009

**Lab-Sample Number:** K00002119003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 01/20/2009 13:55  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.71 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 5.40  
**Dissolved Oxygen:** 10.55 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002119004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/20/2009 14:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 179 uMHO  
**Temperature:** 5.44  
**Dissolved Oxygen:** 10.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	980	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	980	µg/L	12.8	20	M Pattanayek	1/26/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	3.3J	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	58	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	0.21J	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	2.0J	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	1.0	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	4.7	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	1.7	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	78	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	2.1	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	0.25J	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	4.0J	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	7.0	µg/L	1.9	5	M Pattanayek	1/24/2009

**Lab-Sample Number:** K00002119004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 01/20/2009 14:10  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.85 pH Units  
**Chlorine, residual:**  
**Conductivity:** 179 uMHO  
**Temperature:** 5.44  
**Dissolved Oxygen:** 10.28 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected



**Lab-Sample Number:** K00002119005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/20/2009 14:50  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 7.18  
**Dissolved Oxygen:** 11.21 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	130	µg/L	6.4	10	M Pattanayek	1/24/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	34	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	0.22J	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	1.8	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	0.36J	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	39	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	0.87J	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	0.12J	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	2.6J	µg/L	1.9	5	M Pattanayek	1/24/2009

**Lab-Sample Number:** K00002119005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3 near Hwy 70 bridge  
**Sampler Project Name:** TVA-Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 01/20/2009 14:50  
**Sampler's Name:** Larry Everett  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 01/21/2009 13:45  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 162 uMHO  
**Temperature:** 7.18  
**Dissolved Oxygen:** 11.21 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected

<b>Lab-Sample Number:</b>	K00002119006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.91      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley F	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA-Ash Spill	<b>Conductivity:</b>	195      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	5.82
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.27      mg/L
<b>Date/Time Collected:</b>	01/20/2009    15:05	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	01/21/2009    13:45		
<b>Received By:</b>	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	01/22/2009				A Wilson	1/22/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	190	µg/L	2.9	10	A Bass	1/23/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	1/24/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	1/24/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	1/24/2009
Barium	34	µg/L	2.5	5	M Pattanayek	1/24/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	1/24/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	1/24/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	1/24/2009
Cobalt	0.21J	µg/L	0.04	1	M Pattanayek	1/24/2009
Copper	1.1	µg/L	0.38	1	M Pattanayek	1/24/2009
Lead	0.36J	µg/L	0.10	1	M Pattanayek	1/24/2009
Manganese	50	µg/L	0.42	1	M Pattanayek	1/24/2009
Nickel	0.85J	µg/L	0.25	1	M Pattanayek	1/26/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	1/24/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	1/26/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	1/24/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	1/24/2009
Zinc	2.5J	µg/L	1.9	5	M Pattanayek	1/24/2009

<b>Lab-Sample Number:</b>	K00002119006	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.91      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley F	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA-Ash Spill	<b>Conductivity:</b>	195      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	5.82
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.27      mg/L
<b>Date/Time Collected:</b>	01/20/2009    15:05	<b>Other:</b>	
<b>Sampler's Name:</b>	Larry Everett	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327-34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	01/21/2009    13:45		
<b>Received By:</b>	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.13	0.2	A Wilson	1/23/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected